



CASTLEMAINE NATURALIST II

Pres: Mr R. Bradfield.
Sec : Mrs R. Mills
Treas: Mr L. Bransgrove.

MARCH, 1977

Monthly meetings are held on the second Friday of each month (third Friday in April), at the

Castlemaine Education Centre (SEC Building, Mostyn St) at 8 p.m. Visitors and prospective members are invited to attend the club's sessions.

Orchids of the Castlemaine District Number 6

HYACINTH ORCHID (*Dipodium punctatum*) By R. Mills

Flowering Time: December-February.

I have seen this orchid at Glenluce and at Barkers Creek. Although it can vary, the flowers in this area seem to be the common pink, spotted with deeper pink. The plant used as a model however was not very heavily spotted.

The stem is a deep pink, and as the plant is a ground epiphyte it does not have chlorophyll or leaves i.e. it makes no food of its own but feeds off decaying plant material.

Its height varies from 20 to 60 cm.

CORRECTION

In last month's report of the new Onion Orchid for this district, the third sentence was wrongly typed. It should read:-

"This orchid bears a close resemblance to *Microtis unifolia*, which is widespread throughout this area with many well established colonies."

(The orchid has a single leaf, hence *unifolia*)

THIS MONTH'S EMBLEM The emblem is *Eriostemon verrucosus*, known as the Fairy Wax-flower or Bendigo Wax-flower. It is a common plant in the local forests. The series of drawings are by Geoff Sitch. They have been reduced in size photographically.



THE STARS THROUGH BINOCULARS

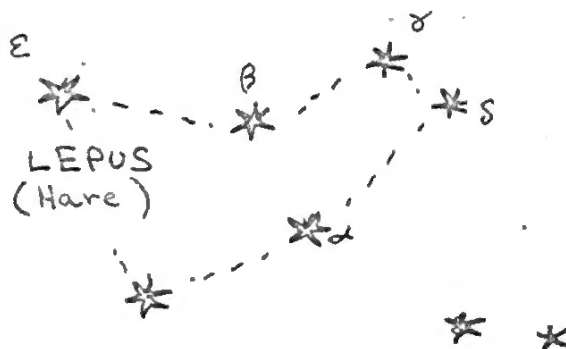
For some astronomy, binoculars are unsurpassed. To keep night vision, cover your torch with red cellophane when referring to star maps.

BRIGHTNESS IN CONSTELLATIONS

Generally, order is

- | | |
|------------|---------|
| α | alpha |
| β | beta |
| γ | gamma |
| δ | delta |
| ϵ | epsilon |

NEAR ORION



Rigel An extremely hot blue star - very much hotter and brighter than our sun - must be fairly young. (compare colour with Betelgeuse and Aldebaran)

Interesting views with many stars in the field

Great nebula of Orion - dust clouds lit up by starlight.

ORION

Base of Saucerpan is belt of Orion; handle is sword. Many small stars make up the sword (handle)

Aldebaran A giant red star.

TAURUS (The bull)

HYADES An open cluster
Excellent binocular view

Triangle of stars

Betelgeuse

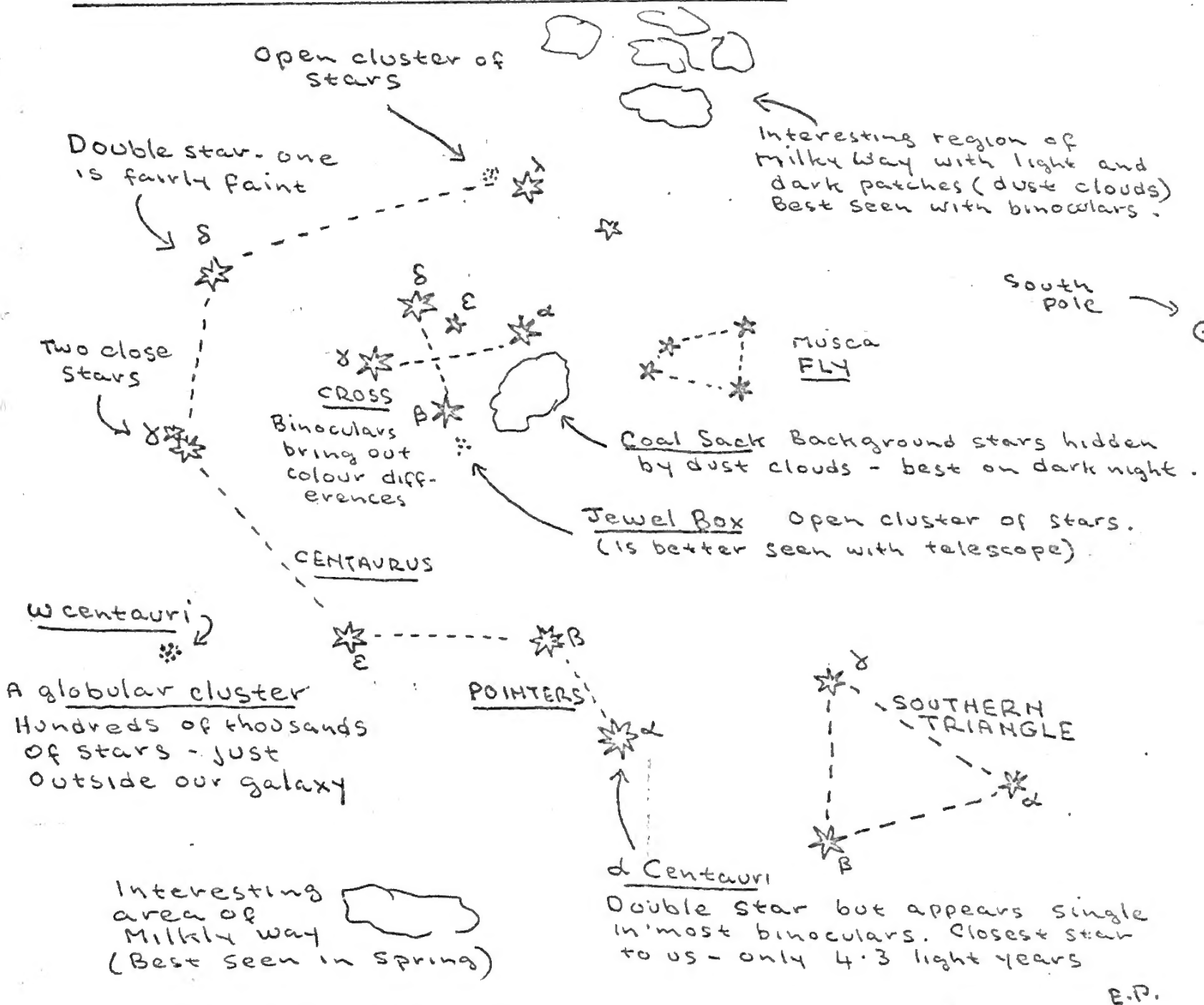
(Beetle-juice is not really correct). A giant red star - diameter is 300 million miles, which is larger than the earth's orbit. A dying star; its brightness is variable.

PLEIADES (The Seven Sisters)

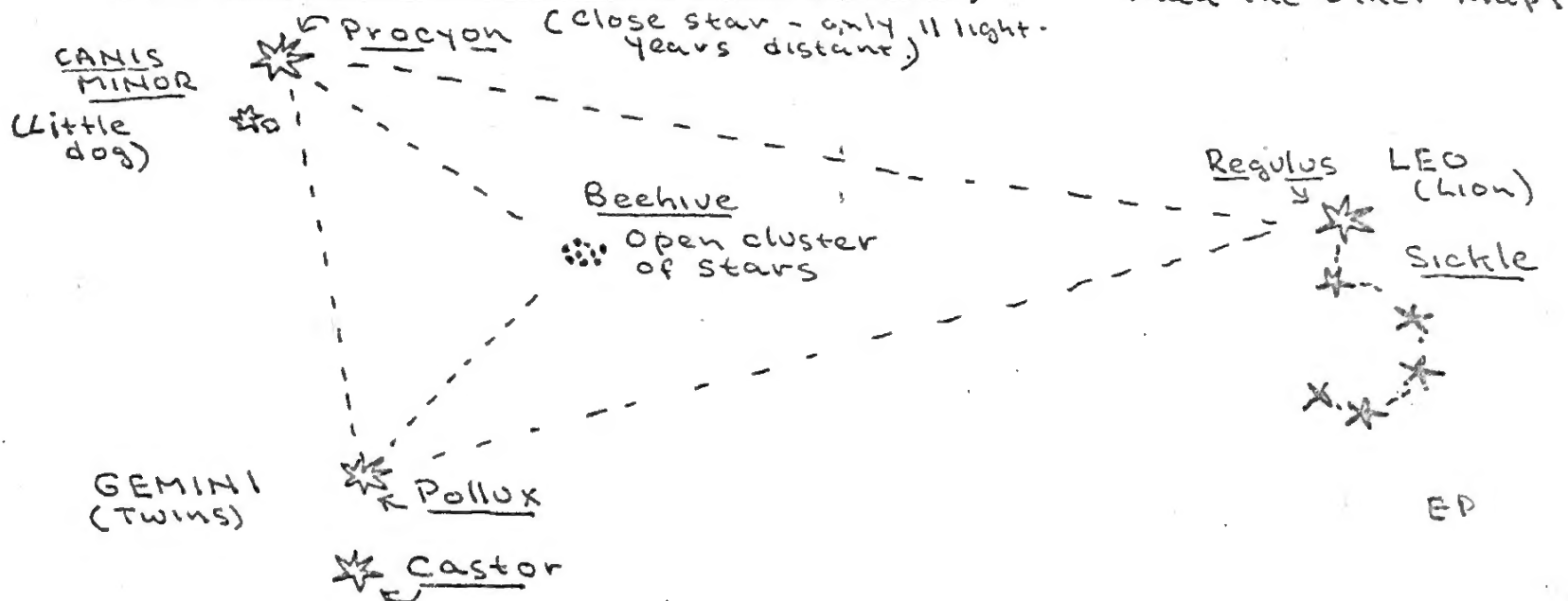
Most people can see six of the sisters. A few can see eight or more. Compare with your count with binoculars. A cluster of related stars, photographs show dust between the stars. Best seen in summer.

Interesting part of Milky Way with bright areas and dark dust clouds

NEAR THE SOUTHERN CROSS



POSITION OF PRÆSEPE (BEEHIVE)



BINOCULARS - WHICH SIZE AND MAGNIFICATION?

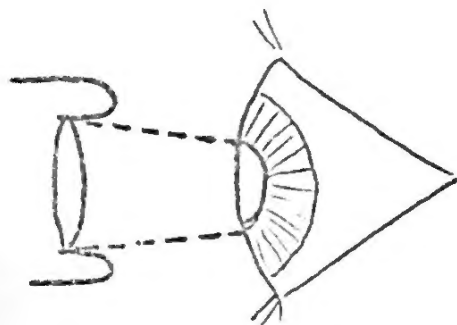
Binoculars vary in magnification, diameter of front lens and angle of view. For example, binoculars labelled 7 X 50, field 7.1° have a magnification of 7 times, a front lens diameter of 50 mm and an angle of view of 7.1° .

Magnification High magnification is undesirable. If the magnification is higher than about 7 or 8, then

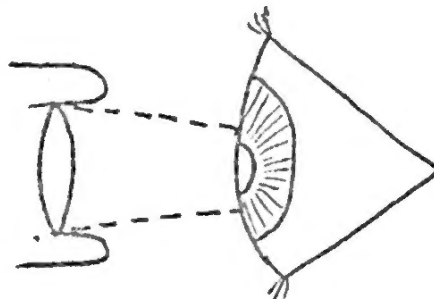
- the binoculars need to be clamped to a tripod (or similar) for clearest viewing
- brightness of image will be reduced.
- the field (angle) of view will generally be less.
- faults in the binoculars will become more noticeable

A power of 6, 7 or 8 is generally the most useful.

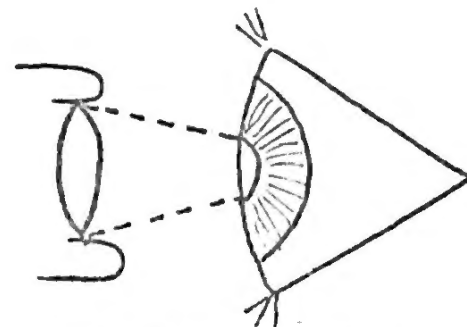
Front Lens Diameter A large diameter front lens gives a brighter image provided that all of the light enters the eye.



7x50 binoculars
Exit beam 7mm
At night, all of the light passes through the pupil.



7x50 binoculars
Exit beam 7mm
In daylight only part of the light beam passes through the pupil



7x30 binoculars
Exit beam 4mm
All of light beam passes through pupil, even in daylight.

(Diameter of exit beam is front-lens diameter \div magnification)

A 7 x 50 is larger and bulkier than a 7 x 30 (or 8 x 30 or 6 x 30) and will not give a brighter image, except at night when the pupil of the eye opens to about 7 mm.

Angle of View Typical angles of view range between 6° and 8° . Generally, the wider angle of view the better, but wide angles require better quality, and so are expensive. Smaller fields of view than this are best avoided.

(Size of the angle of view is determined by the size of the eyepiece lens)

Binoculars for Spectacle Wearers The eye must be at the correct distance from the binoculars, otherwise some of the view is cut off. It is possible to obtain binoculars adjusted for spectacle wearers.

PURCHASING A PAIR OF BINOCULARS

It is possible to purchase quite satisfactory binoculars from department stores, disposals etc.

A test for good binoculars is simple; you should be able to see clearly and without any eye strain at all. Distant printing makes an excellent subject to examine. If possible, compare different brands. You should always check the pair you buy (not a demonstration pair).

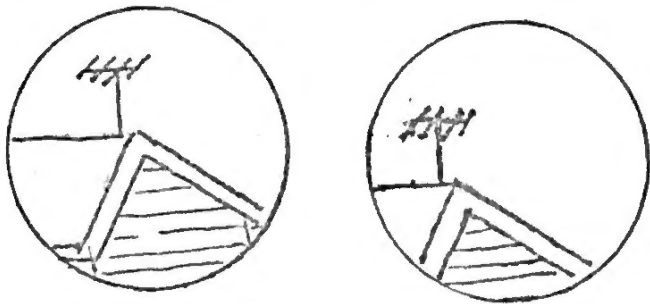
Some common faults are discussed below.

Colour Fringes Look at a bright object (e.g. a TV antenna against a bright sky); it should be sharp without colour fringes.

Alignment Both barrels should point in exactly the same direction - otherwise there will be eyestrain.

There are several ways to test alignment.

1. Rest the binoculars on a firm surface, pointing at an object at least several hundred metres away. The view through both barrels should be the same.



Here both horizontal
and vertical
alignment is
incorrect.

2. Hold the binoculars several inches from the eyes - this will give a much narrower view than usual. If possible support the binoculars on a rest. Alternately open and shut your eyes. The view should not alter position while this is being done.

If the binoculars are to be used for astronomy, an actual test on stars would be worthwhile. Stars should appear as a point of light. Streamers, rays etc from the star may be caused by the binoculars or by the eye.

THE PLANETS THROUGH BINOCULARS

Finding the Planets Planets follow much the same path through the sky as the sun and moon. Their time of rising and setting is given in the newspapers (e.g. Age weather reports). This enables their positions to be estimated quite accurately. Further, the main planets are often very bright and shine with a steadier, less twinkling light than the stars, and have definite size when viewed through binoculars.

Mercury Mercury is always close to the sun and hence can only be seen near sun-set (or sun rise). A good view of the horizon is an advantage. Mercury is quite bright (about that of the "Pointers". Look for its crescent shape.

Venus Venus is also fairly close to the sun - this is why it is called the Evening (or Morning) Star. It is easily recognised by its brightness. It is usually too bright to be properly examined with binoculars - the view during twilight may be best. Look for its crescent shape.

Mars Mars has a reddish colour. Look for a small disc shape.

Jupiter Jupiter is the most interesting planet for binoculars. The round shape can be seen very clearly.

Look for the moons. You should be able to see four; often however one or two are hidden by Jupiter. Look for the differing positions over several nights.



Saturn Saturn is too far away for the rings to be seen clearly. A bulge on either side may be apparent. If the rings are edge on they will be quite invisible (even in a larger telescope)

RECORDER'S REPORT by M. Winterbottom

Mr & Mrs Grant of Harcourt have been most enthusiastic in submitting record cards of sightings and the list of birds found in their vicinity is already quite impressive

Great Egret	Grey Fantail	Red-browed finch
Willie wagtail	White-faced Heron	White-necked Heron
White-eared Honey-eater	Straw-necked Ibis	White Ibis
Black-shouldered Kite	Kookaburra	Mudlark
Dusky Moorhen	Spur-winged Plover	Crimson Rosella
Eastern Rosella	Eastern Spinebill	Brown Thornbill
Rufous Whistler	Blue Wren	Yellow-tailed Thornbill

They have also reported sighting the beautiful Firetail Finch in the Muckleford (N 1) area. Other members - get busy.

LAND CONSERVATION COUNCIL - FINAL RECOMMENDATIONS FOR THE MELBOURNE AREA

The LCC recommendations have been tabled in State Parliament. Implementation of these recommendations now rests with Parliament. Only public land has been considered. The local area is at present under investigation. Of particular local interest :-

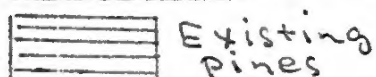
Fryers Ridge: State Park. Land in our area may be added later

Hepburn Area: Regional Park (i.e. a park extensively used for recreation).

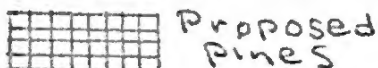
Mt Franklin Part of the Hepburn Regional Park

Daylesford Area Extensions to the pine plantations

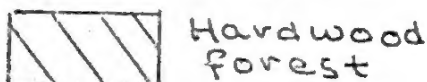
Lerderberg State Park



Existing Pines



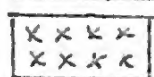
Proposed Pines



Hardwood forest



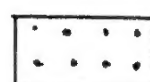
Parks



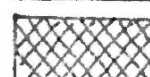
Reference areas



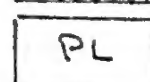
Uncommitted



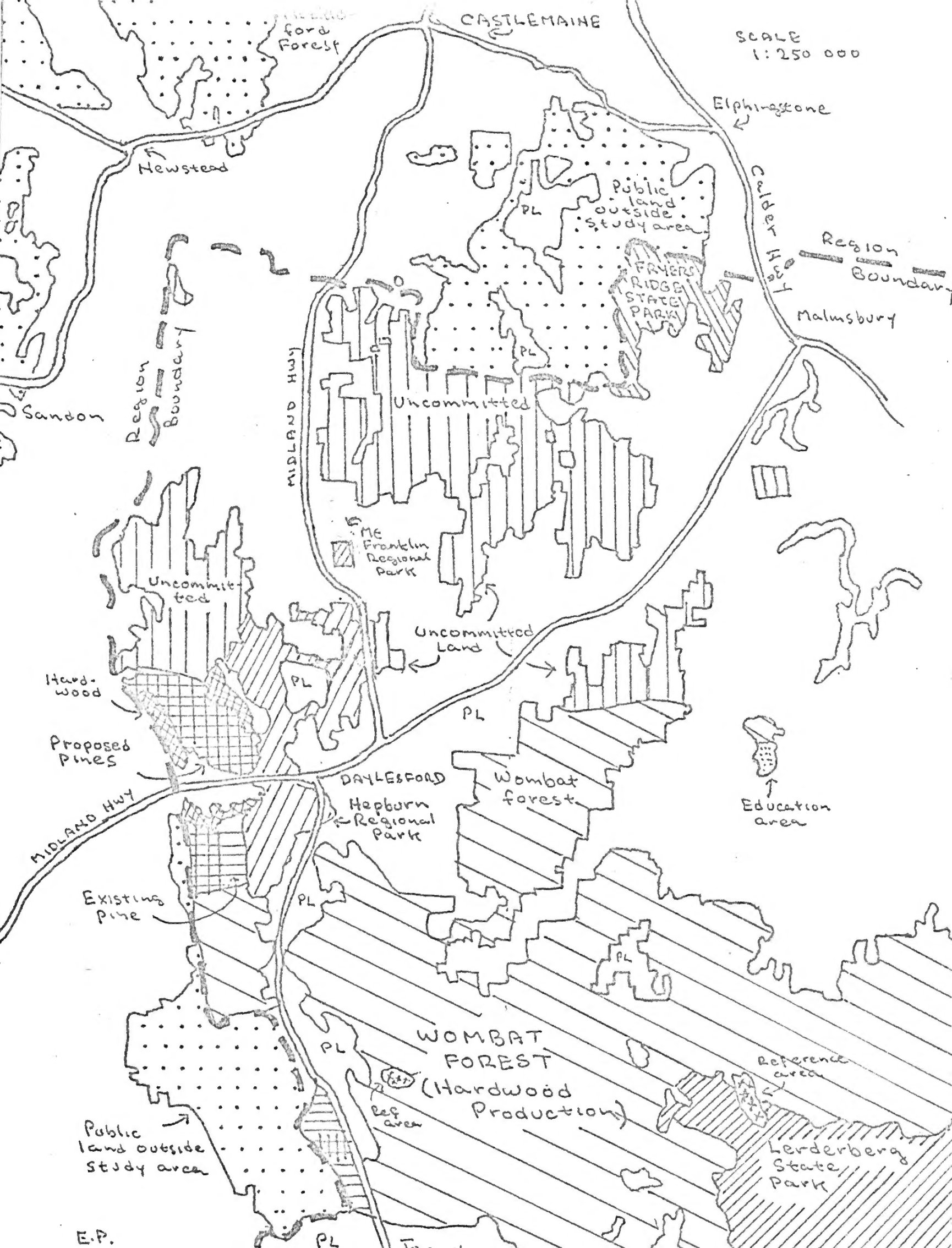
Public land outside Melbourne Area



Buffer areas



Private land



CLUB PROGRAM

March Meeting Friday March 11

Subject: Modern Astronomy

Speaker: Mr E. Perkins

April Meeting Friday April 15

Because of Easter, this is the third Friday.

Speaker: Mr R. Bradfield

Subject: Aborigines of the Castlemaine District.

May Meeting Friday May 13

Members night

June Meeting Friday June 10

To be arranged.

July Meeting Friday July 8

Subject: Geology

Speaker: Mr E. Wilkinson.

COMMITTEE

Mr R. Bradfield(Pres), Mr G.

Broadway, Mr G. Sitch(V.P.),

Mr L. Bransgrove(Treas), Mrs R.

Mills(Sec), Mr&Mrs M Winterbottom

Mr F. Meyer, Miss J Chapman,

Mr E. Perkins(News-sheet), Mrs

B. Singleton. The committee has

asked Miss F. McIver to join the committee.

SUBSCRIPTIONS 1977

Single: \$3

Family: \$5

Student/Junior: \$1

EDUCATION CENTRE

All users of the Education Centre are expected to become members of the Centre. Continued existence of the centre and its facilities is dependent on widespread support from the community. Cost is \$2. per year.

COMMITTEE MEETS

Thursday 24 March, at Ed. Centre

EXCURSIONS

Friday March 18th

Astronomy through binoculars, and using an 8 inch and a 4 inch reflector telescope.

If possible, bring your binoculars.

Meet at Education Centre at 7.30, for travel to Mr Bradfield's home at Vaughan, or meet there at 8 p.m.

Evening will not be held if cloudy. If in doubt, ring 734 294.

Leaders: Mr J. Bradfield, Mr E. Perkins.

Sunday April 17 Vaughan district

A walking excursion. Leave the Education Centre at 10.00

Leader: Mr R. Bradfield.

PHOTOFLORA 1976

The camera club will screen "Photoflora 76" on Tuesday 17 May, in the Education Centre. This is a program of nature slides. We have been invited to attend.

WESTERN VIC FIELD NAT CLUB ASSN.

Campouts for 1977 will be

Macropus Park, Appin (near Kerang, 23-25 April

Colac, Aug 27-28 (Otway Ranges)

Geelong (Brisbane Ranges), Oct.

We will be approached for hosting one of the 1978 campouts.

TREASURER'S REPORT

Accounts: Nov, Dec, Feb magazine- \$9.60; Annual magazine \$28.60, Balance \$80.42

Committee suggests affiliating with FNC of Vic. Cost: \$8